

1 WHAT IS CLAIMED IS:

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3 Sub B1 1. A disk unit, connectable to a server computer and a client computer via  
4 a network, wherein the server computer manages function that the client computer  
5 requests to execute and manages data stored in the disk unit, the disk unit comprising:  
6 disk storage media for storing data; and  
7 a control unit having a memory for storing function and function information  
8 relating to execution of the function that are sent from the server;  
9 wherein said control unit executes the function in response to function execute request  
10 from the client computer and restricts, based on the function information, accesses for  
11 the data stored in said disk storage media during execution of the function.

12 Sub C1 2. A disk unit according to claim 1, wherein:  
13 the function is a selection or extraction process in a database.

14 3. A disk unit according to claim 1, wherein:  
15 the function is a direct data transfer between the client and disk units without  
16 passing through the server, the duplication of data among.

17 4. A disk unit according to claim 1, wherein:

a 2 <sup>an</sup> the function information comprises a list that indicates the accessible area, and  
3 wherein said control unit restricts accesses for the data based on the list.  
5

a 6 5. A disk unit according to claim 4, wherein:  
7 the list comprises attributes, such as read, write and executable, related to  
8 access restriction during function execution.

00E290" SEZ65560 a 1 6. A disk unit according to claim 4, wherein:  
2 said control unit abnormally terminates execution of the function in the case  
3 that an access occurs in violation of the access restriction.

a 1 7. A disk unit according to claim 1, wherein:  
2 said control unit monitors whether execution of the function was performed  
3 successfully and restores data stored in said disk storage media to its state prior to  
4 execution of said function in the case that execution of the function was not  
5 successful.

a 1 8. A disk unit according to claim 1, wherein:  
2 <sup>disk</sup> said control unit monitors whether execution of the function was performed  
3 successfully, sets in the function information a user command that specifies whether  
4 to restore data stored in said disk storage media to its state prior to execution of the

5 function in the case that execution of the function was not successful and restores data  
6 stored in ~~disk~~ <sup>said disk</sup> storage media to its state prior to execution of the function only in  
7 the case where a command has been set in the function information to restore data  
8 stored in said disk storage media to its state prior to execution of the function in the  
9 case that execution of the function was not successful.

1 9. A disk unit according to claim 7, wherein:  
2 said control unit does not overwrite non-updated data with data updated from  
3 the function execution, until the execution of the function is complete.

1 10. A disk unit according to claim 8, wherein, said disk unit is  
2 characterized by ~~said~~ <sup>a</sup> control unit that does not overwrite non-updated data with data  
3 updated from the function execution, until the execution of the function is complete.

1 11. A disk unit according to claim 9, wherein:  
2 said control unit stores data updated from said function execution in the  
3 memory.

1 12. A server computer, connectable to a client computer and a disk unit via  
2 a network, comprising:  
3 storage unit for storing a program; and

4        processing unit for executing the program stored in the storage unit;  
5        wherein the program has the steps of:  
6        creating function information to restrict the access area for data stored in the  
7        disk unit at each function execute request in the case that a function execute request  
8        from the client computer is received, which is performed at the disk unit; and  
9        sending the function and the function information to the disk unit.

1            13.      A server unit according to claim 12, wherein:  
2      said processing unit receives at least user ID information from the client computer and  
3      creates the function information to restrict the access area based on the user ID  
4      information that was received.

14. A disk unit, connectable to a client computer via a network,  
comprising:  
disk storage media to store data, and  
a control unit, wherein  
said control unit receives function execute requests and user ID information  
from a client unit via a network and based on said user ID information, creates  
function information to restrict the access area for data stored in said storage media at  
each function execute request, and restricts the access area based on said function  
information.

1 15. A method of controlling a disk unit connectable to a server computer  
2 and a client computer via a network, wherein the disk unit has disk storage media for  
3 storing data, and wherein the server computer manages function that the client  
4 computer requests to execute and manages data stored in the disk unit, the method  
5 comprising the steps of:  
6 receiving function and function information relating to execution of the  
7 function from the server;  
8 executing the function in response to function execute request from the client  
9 computer; and  
10 restricting, based on the function information, accesses for the data stored in  
11 said disk storage media during execution of the function.

1561 16. A method of controlling a disk unit according to claim 15, wherein  
2 the function is a selection or extraction process in a database.

1 17. A method of controlling a disk unit according to claim 15, wherein  
2 the function is a direct data transfer between the client and disk units without  
3 passing through the server, ~~the duplication of data among~~

1 18. A method of controlling a disk unit according to claim 15, wherein  
2 the function information comprises a list that indicates <sup>an</sup> ~~the~~ accessible area, and  
3 wherein said control unit restricts accesses for the data based on the list.

